



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,181	11/20/2003	Evran Y. Ener	S51.12-0049	9322
164 7590 08/09/2007 KINNEY & LANGE, P.A. THE KINNEY & LANGE BUILDING 312 SOUTH THIRD STREET MINNEAPOLIS, MN 55415-1002			EXAMINER SPISICH, GEORGE D	
			ART UNIT 3616	PAPER NUMBER
			MAIL DATE 08/09/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/718,181

Applicant(s)

ENER ET AL.

Examiner

George D. Spisich

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1 and 7, newly added limitations are drawn to the auxiliary system being forward of the farthest rearward point of the concrete pumping truck. This statement is unclear and inaccurate. For this to be true, the hopper would be considered part of the truck and absent any relation of the auxiliary axle being forward of the hopper, the limitation "truck" would only include truck frame structure, which the auxiliary axle is clearly not forward of. Applicant should relate the auxiliary axle in forward relation to the hopper mounted on the rear of the concrete pumping truck.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5,7-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art in Figure 1 in view of Christenson et al. (USPN 4,705,133) previously cited by Examiner.

Applicant's Prior Art in Figure 1 shows a concrete pumping truck having frame rails, a hopper carried at the rear end of the truck and an outrigger system. However, Figure 1 does not show an auxiliary axle system pivotally mounted at the rear of the truck. It is well known in the art to mount an auxiliary axle system at the rear of a work vehicle that typically hauls heavy loads. These axle systems are pivoted with respect to the frame to contact the ground when needed and raised when not needed. These auxiliary axles help to distribute the weight of the vehicle and its load and improve the security of the vehicle by increasing the contact between the wheels and the ground for added traction and stability.

Christenson et al. shows an auxiliary axle system having a U-shaped frame (with an additional cross beam 28') having a base or cross member (28) and a pair of spaced arms (32,32', best seen in Figure 2) connected at one end to the cross member, the pair of spaced arms having a free end connected to a pair of spaced wheel mounts, the pair of spaced wheel mounts being pivotally connected to a respective one of the pivotable wheels. Christenson et al. shows first and second connector arms (24,24') connected to the cross member and extending in a direction opposite the direction of the pair of spaced arms, the first and second connector arms pivotally mounted to a respective truck frame rail on the vehicle and means which is at least one hydraulic cylinder (30) connected to a support surface of the vehicle (31) and the U-shaped frame for moving

the auxiliary axle system between a first position in contact with a ground surface and a second position elevated above the ground surface. The hydraulic cylinder is connected to "at least" one of the support arms via the cross member.

Christenson et al. shows each of the pair of pivotable wheels comprises a steering arm connected to the wheel, the steering arm of each wheel connected by a tie rod (34). The mounting of the auxiliary axle system would read on the relationship of the axle to the hopper. Specifically, the relation of the auxiliary axle not extending rearward of the hopper would be a size relation that would be achieved when the wheel arrangement of Christenson et al. is adapted to the Prior Art concrete pumping truck. The auxiliary axle of Christenson et al. (see Figs. 1 and 4-6) show how the auxiliary axle is "collapsed" in a storage position and the axle (at least a portion of the axle) is sized and shaped to fit "around" portions of the vehicle (see Fig. 6) to remain under any obstructions of the truck. The wheels in this position are considered to be "on the side" of the hopper at least in the rear view.

Christenson et al. discloses a mounting bracket (23,23') connected to each of the truck frame rails at the rear end of the concrete pumping truck, each mounting bracket connected to a housing containing a bearing, wherein the first connector arm and the second connector arm are pivotally connect to a respective bearing housing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the auxiliary axle system as taught by Smith et al. on the rear of the Prior Art Figure 1 as it is well known in the art to add an auxiliary axle to help distribute the load and increase traction and stability.

Claims 1-5,7-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art in Figure 1 in view of Christenson et al. (USPN 4,762,421).

Applicant's Prior Art in Figure 1 shows a concrete pumping truck having frame rails, a hopper carried at the rear end of the truck and an outrigger system. However, Figure 1 does not show an auxiliary axle system pivotally mounted at the rear of the truck. It is well known in the art to mount an auxiliary axle system at the rear of a work vehicle that typically hauls heavy loads. These axle systems are pivoted with respect to the frame to contact the ground when needed and raised when not needed. These auxiliary axles help to distribute the weight of the vehicle and its load and improve the security of the vehicle by increasing the contact between the wheels and the ground for added traction and stability.

Christenson et al. shows an auxiliary axle system having a U-shaped frame having a base or cross member (24) and a pair of spaced arms (12,12' and portion of 11,11'), best seen in Figure 5) connected at one end to the cross member, the pair of spaced arms having a free end connected to a pair of spaced wheel mounts connected to a respective one of the pivotable wheels. The inclusion of an additional raised cross beam (28) does not prevent the frame structure of Christenson et al. from being considered a "U-shaped frame". Christenson et al. shows first and second connector arms (end portions of 11,11') connected to the cross member and extending in a direction opposite the direction of the pair of spaced arms, the first and second connector arms pivotally mounted to a respective truck frame rail on the vehicle and

Art Unit: 3616

means which is at least one hydraulic cylinder (21) connected to a support surface of the vehicle (7) and the U-shaped frame for moving the auxiliary axle system between a first position in contact with a ground surface and a second position elevated above the ground surface. The hydraulic cylinder is connected to "at least" one of the support arms via the cross member.

Christenson et al. shows each of the pair of pivotable wheels comprises a steering arm (15) connected to the wheel, the steering arm of each wheel connected by a tie rod (29). The mounting of the auxiliary axle system would read on the relationship of the axle to the hopper.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to mount the auxiliary axle system as taught by Smith et al. on the rear of the Prior Art Figure 1 as it is well known in the art to add an auxiliary axle to help distribute the load and increase traction and stability.

With respect to the orientation of the auxiliary axle not extending rearward of the hopper and being stored in a position such that the wheels are arranged on the side of the hopper, when the auxiliary axle is adapted to the Prior Art concrete pumping truck, the spatial relation of "not extending rearward of the hopper" would be met. Also, the pivoting of the auxiliary axle (see Figs. 2 and 3) allows the axle to be collapsed such that in the stored position the wheels are positioned "around" or on respective "sides" of the hopper due to the open space that the auxiliary axle provides in the storage position and remain under any obstructions above the auxiliary axle.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,705,133) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Cherney et al. (USPN 5,897,123) provided in Applicant's IDS.

It may be argued that Prior Art Figure 1 in view of Christenson et al. does not show a mounting bracket connected to the truck frame rails and the mounting bracket connected to a housing containing a bearing and the at least one hydraulic cylinder connected between an outrigger support and the U-shaped frame.

Cherney et al. shows an auxiliary axle system pivotally mounted on the rear of a concrete truck. There is shown a mounting bracket (540,510,512) connected to each of the truck frame rails at the rear end of the truck, each mounting bracket connected to a housing (560) containing a bearing (570) wherein the first connector arm and the second connector arm are pivotally connected to a respective housing bearing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system as would be present in the Prior Art Figure 1 in view of Christenson et al. by providing a mounting bracket on the end of the vehicle rails and having a housing and a bearing as shown by Cherney et al. so as to provide a stable mounting structure for the auxiliary axle system.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied



Art Unit: 3616

to claims 1-5,7-9 and 11-14 above, and further in view of Cherney et al. (USPN 5,897,123) provided in Applicant's IDS.

It may be argued that Prior Art Figure 1 in view of Christenson et al. does not show a mounting bracket connected to the truck frame rails and the mounting bracket connected to a housing containing a bearing and the at least one hydraulic cylinder connected between an outrigger support and the U-shaped frame.

Cherney et al. shows an auxiliary axle system pivotally mounted on the rear of a concrete truck. There is shown a mounting bracket (540,510,512) connected to each of the truck frame rails at the rear end of the truck, each mounting bracket connected to a housing (560) containing a bearing (570) wherein the first connector arm and the second connector arm are pivotally connected to a respective housing bearing.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system as would be present in the Prior Art Figure 1 in view of Christenson et al. by providing a mounting bracket on the end of the vehicle rails and having a housing and a bearing as shown by Cherney et al. so as to provide a stable mounting structure for the auxiliary axle system.

Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of French (USPN 2,650,106).

Applicant's Figure 1 in view of Christenson et al. does not show a tie rod having a bend such that the central portion is in a different plane than the end portions and the particular relationship with the hopper. Smith et al. only shows a straight tie rod.

French shows an axle system having pivoted wheel carriers connected to each other with a tie rod (17) having a central portion (18) that is offset from the end portion so as to be in a different plane. This arrangement allows for the adjustment of the tie rod and allows for different spatial relationships between the parts and systems of the vehicle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tie rod of Prior Art Figure 1 in view of Christenson et al. (shown in Christenson et al.) by providing a tie rod having an offset central portion as taught by French so as to provide adjustment and particular spatial relationships with respect to other parts of the concrete pumping vehicle. The tie rod of French would meet the limitations of the tie rod spatial relationship with respect to the hopper of the Prior Art Figure 1.

Claims 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5, 7-9 and 11-14 above, and further in view of Smith et al. (USPN 6,189,901).

Applicant's Prior Art Figure 1 in view of Christenson et al. has been discussed in the prior rejection, however does not show mounting flanges on the end of the support arms and one end of a pair of hydraulic cylinders connected to the support arms.

Smith et al. discloses an auxiliary axle having support arms (30) having pair of mounting flanges and the first end of a pair of hydraulic cylinders is connected between the pair of mounting flanges on the support arms. Inherently, having a pair of space hydraulic cylinders would provide a more stable operation for the auxiliary axle.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the auxiliary axle system of Prior Art Figure 1 in view of Christenson et al. by providing mounting flanges on the support arms and mounting a pair of hydraulic cylinders to the mounting flanges of the support arms and between the frame so as to provide direct control and improved stabilization of the support arms as taught by Smith et al.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art Figure 1 in view of Christenson et al. (USPN 4,762,421) as applied to claims 1-5,7-9 and 11-14 above, and further in view of Konop (USPN 6,247,713).

Applicant's Prior Art Figure 1 in view of Christenson et al. has been discussed in a prior rejection, however, neither show a support plate connected to the cross member and the pair of support arms.

Art Unit: 3616

Konop et al. shows an auxiliary axle system (as best seen in Figure 2) having a support plate (the curved portion in the junction of parts 120 and 162). This support plate would increase the strength of the axle system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the axle system of Figure 1 in view of Christenson et al. by provided a support plate as taught by Konop et al. to strengthen the U-frame and axle system.

### ***Response to Arguments***

Applicant's arguments filed May 21, 2007 have been fully considered but they are not persuasive.

With respect to Applicant's argument that the prior art only shows an auxiliary axle on a different type of vehicle and further teaches an axle that extends further back than the rearward most part of the vehicle, Examiner disagrees and maintains the rejection. The prior art shows mounting an auxiliary axle on the end of a heavy work vehicle, which is analogous to a concrete pumping truck, and when the axle is mounted on the prior art truck, the relation that the axle does not extend past the end of the vehicle would be met since the mounting area of the Prior Art concrete pumping truck is significantly in from the end of the mounting portion on the applied art pumping truck, therefore leaving significant room for the hopper to extend rearward of the auxiliary axle..

Art Unit: 3616

With respect to Applicant's argument that the prior art would not allow for the auxiliary axle to be positioned "around" or on the "side" of the hopper in the storage position of the auxiliary axle, Examiner disagrees and maintains the rejection. The applied auxiliary axles have pivoting detail that allows for the axle system to be positioned "around" or on the "side" of an obstruction. In the case of the modified Prior Art concrete pumping truck, it would have been obvious to allow for the "collapsing" of the auxiliary axles of the Applied references around the hopper. Any obstructions in the applied auxiliary axles would be above the auxiliary axle and would meet the claim limitations that the wheels are positioned "around" or on the "side" of the hopper at least clearly shown in the rear view.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George D. Spisich whose telephone number is (571) 272-6676. The examiner can normally be reached on Monday-Friday 9:00 to 6:30 except alt. Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on (571) 272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

George D. Spisich  
August 2, 2007

  
8/6/07  
PAUL N. DICKSON  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600